

3. — *Some Mosquitos from Ovamboland, S. W. Africa, and from the Cape Province.* — By F. W. EDWARDS, F. E. S.

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The small collection of mosquitos here noted was sent to me for determination by Dr. L. Péringuey. The Ovamboland material was obtained during a trip made on behalf of the South African Museum by Mr. K. H. Barnard, assistant-director, in the early part of 1920. This material contained the following ten species, which were obtained at the localities mentioned: —

- Anopheles mauritianus, Grp. Sandup; Otjiverongo.
- A. squamosus, Theo. Namutoni.
- A. costalis, Theo. Otjiverongo; Namutoni.
- A. funestus, Giles. Namutoni.
- Mucidus scatophagoides, Theo. Nomtele; Ondongua.
- Aedes (Ochlerotatus) chelli, Edw. Nomtele; Namutoni; Andoni; Otjiverongo.
- A. (Ecculex) ochraceus, Theo. Ondongua; Nomtele; Otjiverongo.
- A. (E.) nigeriensis, Theo. Sandup.
- A. (Banksinella) lineatopennis, Ludlow. Otjiverongo.
- A. (Stegomyia) pseudonigeria, Theo. Otjiverongo.

AEDES CHELLI, Edw.

1915. Bull. Ent. Res. vol. 5, p. 277.

This is the most interesting species in the list and was present in the collection in some numbers. There was a slight difference from the type (described from British East Africa), the wings having more numerous pale scales, and the fourth hind tarsal segment being entirely dark. Most fortunately a male was collected, and this proves that the species belongs to the subgenus *Ochlerotatus*, and not to *Ecculex*, as might have been expected; the only other Ethiopian *Ochlerotatus* is the somewhat similar *A. fryeri*, Theo.

The male of *A. chelli* shows the following characters: — Palpi longer than the proboscis by nearly the length of the last segment, mostly black, with some scattered pale scales. Median pale stripe of abdomen confined to the last two segments (recalling the similar sexual difference to be found in *A. rusticus*, Rossi). Pale rings at the bases of the first two hind tarsal segments narrower than in the female, that on the third segment absent altogether. Hypopygium: Sidepieces with basal and apical lobes both very small, the former with a small and dense patch of hair but no spine, the latter practically bare. Clasper somewhat strap-like, broader before the middle, with long terminal spine (thus differing from *A. fryeri*). Claspette with short cylindrical stem, and long, slender, curved, slightly flattened and pale appendage. Lobes of ninth tergite prominent, each with three or four short bristles.

AEDES PSEUDONIGERIA, Theo.

1910. Monogr. Culicid, vol. 5, p. 166.

The two females of this species differ from the type in having the fifth hind tarsal segment black instead of white, but there are no other differences. Important diagnostic characters of this species are the absence of a white spot in the middle of the anterior surface of the mid femora, and the presence of small white spots on the under surface of the mid and hind tibiae, near but not reaching the base.

In addition to the Ovamboland material, a few specimens from the Cape Province were included. These proved of considerable scientific interest, there being no fewer than three new species represented, besides others which had not previously been recorded from the Cape. The species represented were the following: —

Anopheles (*Myzomyia*) *cinereus*, Theo. Montagu (Barnard).

Aedes (*Finlaya*) *barnardi*, sp. n. Oudebosch.

„ (*Ecculex*) *capensis*, sp. n. „

Theobaldia (*Allotheobaldia*) *longiareolata* (Macq.). Kimberley (Lightfoot).

Culex (*Culex*) *pipiens*, L. Stellenbosch (Péringuey).

„ „ *trifilatus*, Edw. Cape Town (Péringuey).

„ „ *tipuliformis*, Theo. Uitenhage (Barnard).

„ (*Neoculex*) *salisburyensis*, Theo. Oudebosch.

„ „ *péringueyi*, sp. n. Cape Town (Dawson).

This list includes two species which have been previously recorded from the Cape Province (*An. cinereus* and *T. longiareolatu*). Apart from these nine, *Culex fatigans* has been recorded, but I am not aware of any other species which as yet are known to exist in the province. The mosquito fauna of this region is indeed less known than that of any other part of Africa, with the possible exception of Abyssinia.

ANOPHELES CINEREUS, Theo.

1901. Monogr. Culicid. vol. 4, p. 161.

The Cape specimens of this species differ slightly from the Rhodesian (type) form, and when more and better material is available they may possibly prove to be distinct. I think there can be scarcely a doubt that this is the species originally described by Loew from Caffraria as *A. costalis*, and that Theobald's interpretation of Loew's species, which is now widely known as *A. costalis*, is incorrect. Since, however, Loew's type appears to be lost, the confusion which a change in nomenclature would produce may perhaps be legitimately avoided. *A. costalis*, Theo, is not yet definitely known to occur in the Cape Province, though it quite probably does so.

AEDES (FINLAYA) BARNARDI, sp. n.

♀. *Head* clothed mostly with rather broad, pointed, close lying pale ochreous scales. Proboscis blue-black, slender, slightly longer than the front femora. Palpi blue-black, one-fifth as long as the proboscis, second segment one-third longer than the first. Tori ochreous. Eyes practically touching. *Thorax* with blackish integument, except for the scutellum, which is ochreous. Mesonotum clothed mostly with black scales, with five straight and rather sharply marked longitudinal lines of pale ochreous; median line forked a short distance in front of the scutellum; lateral lines occupying the margins, and composed of broader scales than the others, expanding into a rather large patch in front of each wing-base. Scutellum nearly bare; a few mixed light and dark scales on the mid lobe. Prothoracic lobes with flat whitish scales; pro-epimera with flat white scales below, narrow ones above; sternopleura and mesepimera rather densely clothed with flat white scales. *Abdomen* blue-black: tergites with rather small basal lateral white spots; sternites with broad white basal bands, narrowed in the middle. Eighth sternite rather small for the sub-genus, densely clothed with dark scales; cerci scarcely distinguishable. *Legs* blue black; front and mid femora

white beneath on the basal third; hind femora white all round on the basal half; mid and hind femora with a narrow white ring close to the tip, some dark scales actually at the tip; tibiae uniformly dark; front tarsi with a few white scales beneath at the bases of the first two segments; mid and hind tarsi with a narrow white ring at the base of the first segment, and a broader one, occupying rather more than half the segment, at the base of the second. *Wing*-scales uniformly blackish, outstanding ones ligulate; venation normal. Wing-length 4.5 mm.

Caledon division: Oudebosch, 1500 ft. Jan. 1919. 5 ♀♀ (cotypes).

The only other Ethiopian species of the subgenus *Finlaya* are *A. longipalpis*, Grünberg, *A. fulgens*, Edw., *A. wellmani*, Theo., and perhaps *A. fuscipalpis*, Edw. The new species is very distinct from all of those in its thoracic ornamentation, but agrees in leg-markings with *A. wellmani*, to which it is obviously not distantly related.

AEDES (ECCULEX) CAPENSIS, sp. n.

Close to *A. (E.) marshalli*, Theo., differing as follows: — Silvery scales on anterior lateral margins of mesonotum forming a narrow line extending from almost the middle line in front to the scutal angle (in *A. marshalli* these scales form a shorter and broader patch); no white pre-apical spots on any of the femora.

Caledon Division: Oudebosch, 1500 ft. Jan. 1919. 3 ♀♀ (cotypes).

The specimens are in bad condition, and a full description cannot be given, but the above diagnosis will be sufficient to distinguish the species. From the nearly allied *R. apicoannulatus*, Edw., and *A. simulans*, N. & C., the new species differs in having (like *A. marshalli*) a pair of small round spots in the middle of the mesonotum composed of flat silvery scales.

CULEX (NEOCULEX) PÉRINGUEYI, sp. n.

♂. *Head* somewhat damaged; apparently covered mainly with narrow curved white scales. Proboscis black-scaled, unusually long for a *Culex*, nearly one-third longer than the front femora. Palpi slender, black scaled, about one-fourth shorter than the proboscis, almost devoid of hairs, penultimate segment rather longer than the terminal. Flagellar joints (except the last two) each with a basal white ring. *Thorax* with uniformly dark brown integument; mesonotum covered with rather large light ochreous curved scales. Prothoracic lobes and proepimera with flat white scales; a small patch of flat white postspiracular scales; larger patches of similar scales

on the sternopleura and mesepimera; one lower mesepimeral bristle. *Abdomen* blackish scaled, the segments with narrow apical white bands. Hypopygium: Side-pieces much swollen at the base, with a patch of hair beneath; lobe rather deeply divided, proximal division with three long stout rods, two with slightly hooked tips, the third more flattened and rounded; distal division with three flattened plates, one longer and broader than the other two; no accessory bristles. Clasper nearly straight, but irregularly shaped, with a rounded postmedian prominence on the flexor surface, apical spine broad and blunt. Ninth tergite not lobed, with four short hairs in widely-separated pairs. Tenth tergite unusually well developed, proximal part broad and hairy, distal part narrower and bare. Tenth sternite without basal arm, and with only a few terminal spines, two or three of them longer than the rest, flattened and round-tipped. Mesosome of two simple, pointed, strongly chitinised lobes. *Legs* black; femora white beneath, hind femora also white laterally for four-fifths of their length; tips of femora narrowly but conspicuously white, those of all the tibiae black. First hind tarsal segment slightly longer than the tibia. *Wings* with dark brown scales, outstanding ones linear, rather long and dense. Upper fork-cell fully three times as long as its stem, its base considerably nearer the base of the wing than that of the lower. Wing-length 4.2 mm.

Cape Town, (*Dawson*). ♂,

This species is very distinct from the other known Ethiopian species of the group (*C. rima*, Theo., *C. rubinotus*, Theo., *C. kingianus*, Edw., and *C. salisburyensis*, Theo.) by the characters of the proboscis, palpi and hypopygium.
